



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460**

Office of Chemical Safety and Pollution Prevention

MEMORANDUM

Date: 24-February-2015

Subject: **Difenoconazole.** Acute and Chronic Aggregate Dietary Exposure and Risk Assessments for the Petition for Use of Difenoconazole on Pea and Bean, Dried Shelled, Except Soybean, Subgroup 6C, Bushberry Subgroup 13-07B and an amended use on Pome Fruit to add Post-Harvest Use of Difenoconazole.

PC Code: 128847	DP Barcode: 421430 & 422995
Decision No.: 484399 & 486674	Registration No.: 100-739 & 100-RLEO
Petition Nos.: 4F8231	Regulatory Action: Amended Section 3
Assessment Type: Single Chemical, Dietary	Registration Case No.: NA
TXR No.: None	CAS No.: 119446-68-3
MRID No.: None	40 CFR: 180.475

Reviewer: Thurston G. Morton, Chemist *Thurston G. Morton*
Risk Assessment Branch IV/Health Effects Division (RABIV/HED; 7509P)

Through: Pete Savoia, Chemist *Pete Savoia*
Julie Van Alstine, Environmental Health Scientist *Julie Van Alstine*
Dietary Exposure Science Advisory Council (DESAC)

And

Elissa Reaves Ph.D., Branch Chief
RABIV/HED (7509P)

A handwritten signature in blue ink that reads "Elissa Reaves".

To: Ivan Nieves, Risk Assessor
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And

Tony Kish (RM 22)
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Executive Summary

Difenoconazole acute and chronic dietary exposure and risk assessments were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID) Version 3.16. This software uses 2003-2008 food consumption data from the U.S. Department of Agriculture's (USDA's) National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). The analyses were performed to support the Section 3 registration on Pea and Bean, Dried Shelled, Except Soybean, Subgroup 6C and Bushberry Subgroup 13-07B of the fungicide difenoconazole [1-[2-[2-chloro-4-(4-chlorophenoxy) phenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1*H*-1,2,4-triazole]. In addition, these analyses were performed to support the amended use of difenoconazole for post-harvest use on pome fruit.

This memorandum was reviewed by two peer reviewers of the DESAC, per DESAC SOP 2012.1.

The unrefined acute analysis assumed tolerance-level residues, 100% crop treated (CT), and the available empirical or DEEM (ver. 7.81) default processing factors. The somewhat refined chronic analysis assumed tolerance-level residues for some commodities, average field trial residues and USDA Pesticide Data Program monitoring samples for the remaining commodities, the available empirical or DEEM (ver. 7.81) default processing factors, and 100% CT. The EDWC of 20.0 µg/L (ppb) was used for the acute dietary exposure analysis and an estimated drinking water concentrations (EDWC) of 13.6 µg/L (ppb) was used for the chronic dietary exposure analysis.

The resulting acute food plus water dietary exposure estimates were less than HED's level of concern (<100% of the acute population-adjusted dose (aPAD)) at the 95th percentile of the exposure distribution for the general U.S. population (15% aPAD) and all population sub-groups; the most highly exposed population subgroup was children 1-2 years old with 49% aPAD. The resulting chronic food plus water dietary exposure estimates were less than HED's level of concern (<100% of the chronic population-adjusted dose (cPAD)) for the general U.S. population (26% cPAD) and all population sub-groups; the most highly exposed population subgroup was children 1 - 2 years old with 88% cPAD. No cancer analysis was performed since it was determined the chronic dietary exposure assessment is protective of cancer effects.

The dietary exposure analyses for the triazole metabolites were previously updated (D414951, T. Morton, 24 Oct. 2013).

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose which HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the PAD. The PAD is equivalent to the point of departure (POD, NOAEL, LOAEL, e.g.) divided by the required uncertainty or safety factors.

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. References which discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: <http://www.epa.gov/fedrgstr/EPA-PEST/2000/July/Day-12/6061.pdf>; or see SOP 99.6 (20-AUG-1999).

The most recent dietary risk assessment for difenoconazole was conducted by T. Morton (15-January-2015; DP#412812).

II. Residue Information

Difenoconazole tolerances are published in 40 CFR§180.475.

Residues of Concern in Plants and Livestock:

Residues of concern were determined based on recommendations from the HED Residues of Concern Knowledgebase Sub-committee (ROCKS) (D391350, 9/19/11). The residue of concern for plant commodities for tolerance expression and risk assessment purposes is difenoconazole *per se*. The HED ROCKS has determined that the parent compound and the CGA-205375 metabolite are the residues of concern in livestock commodities for both the tolerance expression and the risk assessment. In addition, metabolite OH-CGA-169374, which comprised 15% of the TRR in goat milk from the phenyl-labeled study, should be considered as a residue of concern for the dietary risk assessment. Based on available goat metabolism data, total residues of concern in milk for dietary risk assessments (parent, CGA-205375, and OH-CGA-169374), should be calculated by multiplying the tolerance in milk by a factor of 1.5x. Table 1 summarizes tolerance expression and the residues of concern in plant and livestock commodities.

Table 1. Difenoconazole Residues of Concern in Plants and Ruminants.

Matrix		Residues of Concern	
		For Risk Assessment	For Tolerance Expression
Plants	Primary and Rotational crops	Parent Only	Parent Only
Livestock	Ruminant and Poultry	Parent and CGA 205375	Parent and CGA 205375
	Milk	Parent, CGA 205375, and OH-CGA-169374	Parent and CGA 205375
Drinking Water		Parent Only	NA

Note: The triazole-containing metabolites 1,2,4-T, TA, and TAA should be included in the residues of concern for risk assessment purposes only for plant and livestock commodities. Since these metabolites are common to the entire class of triazole-derivative fungicides and because of differential toxicity between metabolites and the various parent compounds, risks associated with exposure to 1,2,4-T and to TA/TAA are addressed separately.

Recommended Tolerances: Based on the residue chemistry data submitted with the previous petitions, HED recommended for establishment of the new food tolerances (DP# 412810, B. Cropp-Kohlligian, 22-August-2013). The recommended, established, and revised tolerances are listed in Table 2 below.

Table 2. Tolerance Summary for Difenoconazole (non-feed items).			
Commodity	Existing/Established Tolerances (ppm)	New Tolerances (ppm)	Average Field Trial Residue or average PDP Residue (ppm)
Rapeseed crop subgroup 20A	0.10	-----	0.10
Brassica subgroup 5A	1.9	-----	2013 PDP data = 708 samples/1 detects/highest det of 0.019 used in chronic for broccoli Cabbage = 0.029
Brassica subgroup 5B	35	-----	5.10
Citrus oil	25	-----	25
Fruit, citrus, group 10	0.6	-----	2011/12 PDP data = 1426 samples/0 detects/highest LOD of 0.005 used in chronic for citrus
Grape	4.0	-----	0.613 2013 PDP data = 176 samples/0 detects/highest 1/2 LOD of 0.005 used in chronic for grape juice
Grape, raisin	6.0	-----	0.615 (3.5x PF)
Nut, tree, group 14	0.03	-----	Almond = 0.005 Pecan = 0.007
Onion, bulb, subgroup 3—07A	0.20	-----	2011/12 PDP data = 744 samples/0 detects/highest ½ LOD of 0.0025 used in chronic
Onion, green, subgroup 3—07B	6.0	-----	6.0
Pistachios	0.03	-----	0.005
Vegetable, cucurbit, group 9	0.7	-----	2011/12 PDP data = 744 samples/0 detects/highest ½ LOD of 0.0025 used in chronic for cantaloupe Cucumber = 0.055 2011/12/13 PDP data = 1115 samples/1 detects/highest det of 0.011 used in chronic for squash/pumpkin
Fruit, Pome, group 11	1.0	-----	Apple = 0.203 Pear = 0.123

Table 2. Tolerance Summary for Difenoconazole (non-feed items).

Commodity	Existing/Established Tolerances (ppm)	New Tolerances (ppm)	Average Field Trial Residue or average PDP Residue (ppm)
Vegetable, Fruiting, Group 8-10	0.60	-----	Tomato = 0.165 Pepper = 0.133 Eggplant=0.133 Okra=0.6
Vegetable, Tuberous and Corm, subgroup 1C	4.0	-----	1.36
Beet, sugar	0.30	-----	0.30
Papaya	0.30	-----	0.30
Banana	0.2	-----	2012/13 PDP data = 1267 samples/0 detects/highest ½ LOD of 0.0025 used in chronic for banana
Barley, grain	0.1	-----	0.10
Cattle fat	0.10	-----	0.10
Cattle, meat	0.05	-----	0.05
Cattle, meat byproducts	0.10	-----	0.10
Cattle, liver	0.40	-----	0.40
Corn, sweet, kernel plus cob with husks removed	0.01	-----	0.01
Cotton, undelinted seed	0.05	-----	0.05
Egg	0.02	-----	0.02
Goat, fat	0.10	-----	0.10
Goat, meat	0.05	-----	0.05
Goat, meat byproducts (except liver)	0.10	-----	0.10
Goat, liver	0.40	-----	0.40
Hog, fat	0.10	-----	0.10
Hog, meat	0.05	-----	0.05
Hog, meat byproducts (except liver)	0.1	-----	0.10
Hog, liver	0.40	-----	0.40
Horse, fat	0.10	-----	0.10
Horse, meat	0.05	-----	0.05
Milk	0.02 proposed to be increased from 0.01 ppm	-----	0.02
Rye, grain	0.01	-----	0.01
Sheep, fat	0.10	-----	0.10
Sheep, meat	0.05	-----	0.05
Sheep, meat byproducts (except liver)	0.10	-----	0.10
Sheep, liver	0.40	-----	0.40
Wheat, grain	0.1	-----	0.10

Table 2. Tolerance Summary for Difenoconazole (non-feed items).

Commodity	Existing/Established Tolerances (ppm)	New Tolerances (ppm)	Average Field Trial Residue or average PDP Residue (ppm)
Wax apple	0.07	-----	0.07
Mango	0.07	-----	0.07
Carrot	0.50	-----	2013 PDP carrot data = 712 samples/11 detects/max detect of 0.007 used for chronic
Soybean, seed	0.15	-----	0.0215
Fruit, stone, group 12	2.5	-----	Cherry = 0.622 2013 PDP data = 285 samples/6 detects/highest det of 0.038 used in chronic for peach 2013 PDP data = 543 samples/5 detects/highest det of 0.004 used in chronic for nectarine 2011/12/13 PDP data = 1347 samples/0 detects/highest 1/2 LOD of 0.0025 used in chronic for plum
Strawberry	2.5	-----	0.495
Turnip greens	35	-----	5.10
Oat, grain	0.01	-----	0.01
Wax Jambu	1.5	-----	1.5
Dragonfruit	1.5 (translated from wax jambu)	-----	1.5
Pea and bean, dried shelled, except soybean, subgroup 6C	-----	0.20	Dried bean = 0.014 Dried pea = 0.034
Bushberry subgroup 13-07B	-----	4.0	1.009

The dietary exposure analyses for the triazole metabolites (D414951, T. Morton, 24 Oct. 2013) was previously updated. Addition of these uses did not significantly change the dietary exposure for the triazole metabolites.

Food Residues and processing factors used in the Acute and Chronic Analysis: The acute analysis assumed tolerance-level residues and 100% CT for all the registered and proposed crops. Tolerance-level residues were also assumed for all livestock tissues in this assessment. The chronic analysis assumed tolerance-level residues for some commodities, average field trial residues and USDA PDP average residues for the remaining commodities, and 100 % CT. Those commodities where field trial data were used are summarized below. HED SOP 2000.1

Guidance for Translation of Field Trial Data from Representative Commodities in the Crop Group Regulation to Other Commodities in Each Crop Group/Subgroup dated 9/12/2000 was used in translating to other commodities in the crop group. Experimental processing factors were used for apple juice (0.04x), grape juice (0.2x), citrus juices (0.1x), potato chips (0.5x), potato

granules/flakes (0.5x), raisin (3.5x chronic only since the raisin tolerance was used in acute), sugar beet molasses (0.6x), tomato paste (1.6x), and tomato puree (0.5x); DEEM (ver. 7.81) default processing factors were assumed for other processed commodities.

Almond: Almond field trial residues were used from MRID 47586101.

Apple: Field trial residues were used from MRID 46950233.

Pea and Bean, Dried Shelled, Except Soybean, Subgroup 6C: Field trial residues were used from MRID 49227601.

Banana: Highest LOD of 0.0025 ppm in 2012/2013 USDA PDP data used. PDP found 0 detects in 1267 banana samples tested.

Broccoli: Highest residue in 2013 USDA PDP data used (0.019 ppm). PDP found 1 detect in 708 samples tested.

Bushberry: Field trial residues were used from MRID 49227602.

Cabbage: Field trial residues were used from 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs. To refine the dietary exposure data from only cabbage samples without wrapper leaves were used.

Cantaloupe: Highest LOD of 0.0025 ppm in 2011/2012 USDA PDP data used. PDP found 0 detects in 744 cantaloupe samples tested.

Carrot: Highest detect of 0.007 ppm in 2013 USDA PDP data used. PDP found 11 detects in 712 carrot samples tested.

Chickpea: Field trial residues were used from MRID 47929805.

Cucumber: Field trial residues were used from MRID 47586103. Residues from 0-1 day PHI were used since registered labels allow from 0-1 day PHI.

Grape: Highest LOD of 0.005 ppm in 2013 USDA PDP data used for grape juice. PDP found 0 detects in 176 grape juice samples tested. Average field trial residue from MRID 47586105 used for grape.

Grapefruit: Highest LOD of 0.005 ppm in 2011/2012 USDA PDP data used. PDP found 0 detects in 1426 citrus samples tested.

Lemon: Highest LOD of 0.005 ppm in 2011/2012 USDA PDP data used. PDP found 0 detects in 1426 citrus samples tested.

Lime: Highest LOD of 0.005 ppm in 2011/2012 USDA PDP data used. PDP found 0 detects in 1426 citrus samples tested.

Mustard Greens: Field trial residues were used from MRIDs 47417704, 47417707, and 47586102. Residues from 1-7 day PHI were used since registered labels allow from 1-7 day PHIs.

Nectarine: Highest detect of 0.004 ppm in 2013 USDA PDP data used. PDP found 5 detects in 543 nectarine samples tested.

Onion, bulb, subgroup 3-07A: Highest LOD of 0.0025 ppm in 2011/2012 USDA PDP data used. PDP found 0 detects in 744 onion samples tested.

Orange: Highest LOD of 0.005 ppm in 2011/2012 USDA PDP data used. PDP found 0 detects in 1426 citrus samples tested.

Peach: Highest detect of 0.038 ppm in 2013 USDA PDP data used. PDP found 6 detects in 285 peach samples tested.

Pear: Field trial residues were used from MRID 46950233.

Pecan: Field trial residues were used from MRID 47586106.

Peppers: Field trial residues were used from MRID 46950234.

Plum: Highest LOD of 0.0025 ppm in 2011/2012/2013 USDA PDP data used. PDP found 0 detects in 1347 plum samples tested.

Potato: Field trial residues were used from MRID 47929804.

Soybean: Field trial residues were used from MRID 47929801.

Stone Fruit: Field trial residues were used from MRID 47929803.

Strawberry: Field trial residues were used from MRID 47929802.

Sugar Beet: Field trial residues were used from MRID 46950236.

Summer Squash: Highest detect of 0.011 ppm in 2011/2012/2013 USDA PDP data used for squash and pumpkin. PDP found 0 detects in 744 squash samples tested.

Tomato: Field trial residues were used from MRIDs 46950234, 47417705, and 47417708.

III. Percent Crop Treated Information

The acute dietary exposure analyses assumed 100% crop treated (CT). Average %CT was used for the following crops: almond 5%, cabbage 2.5%, cucumbers 5%, garlic 5%, grape 5%, grapefruit 2.5%, onions 5%, orange 2.5%, pecan 2.5%, peach 1%, peppers 2.5%, pistachio 2.5%, pumpkin 2.5%, squash 5%, strawberry 2.5%, sugar beets 15%, tangerine 2.5%, tomatoes 25%, walnut 2.5%, watermelon 5%, and wheat 10%.

IV. Drinking Water Data

The drinking water estimates used in the dietary risk assessment were provided by the Environmental Fate and Effects Division (EFED; Memo, F. Khan, 13-November-2014; D421092). The EDWCs for surface water for the requested new uses did not supersede the previously recommended drinking water concentrations. For surface water, revised recommended EDWCs are 20.0 µg/L for peak, 13.6 µg/L for annual mean and 9.9µg/L for annual average concentrations Recommended EDWCs for human health are **20.0** µg/L (ppb) for the acute dietary (food plus water) exposure analysis and the 1-in-10 year annual mean EDWC of **13.6** µg/L (ppb) for the chronic dietary (food plus water) exposure analysis.

V. DEEM-FCID Program and Consumption Information

Difenoconazole acute and chronic dietary exposure assessments were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database DEEM-FCID, Version 3.16, which incorporates consumption data from USDA's National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). This dietary survey was conducted from 2003 to 2008. The data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g. apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups, but for acute exposure assessment are retained as individual consumption events. Based on analysis of the 2003-2008 WWEIA consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50-99 years old.

For chronic dietary exposure assessment, an estimate of the residue level in each food or food-form (e.g., orange or orange juice) on the food commodity residue list is multiplied by the average daily consumption estimate for that food/food form. The resulting residue consumption estimate for each food/food form is summed with the residue consumption estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

For acute exposure assessments, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a deterministic exposure assessment, or “matched” in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (*i.e.*, those who reported eating relevant commodities/food forms) and a per-capita (*i.e.*, those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for all tiers of analysis. However, for Tiers 1 and 2, significant differences in user vs. per capita exposure and risk are identified and noted in the risk assessment.

VI. Toxicological Information

On 08-SEP-1998, HED’s Hazard Identification Assessment Review Committee (HIARC) evaluated the toxicology database of difenoconazole and re-assessed the RfD established in 1994, as well as the toxicological endpoints for the dietary and occupational exposure risk assessments that were selected in 1994. At this meeting, the HIARC also addressed the potential enhanced sensitivity of infants and children from exposure to difenoconazole as required by the Food Quality Protection Act (FQPA) of 1996 (HED Doc. No. 012873, 25-SEP-1998). In July, 2007, the RAB1 toxicologists and risk assessment team met to reevaluate the endpoints selected by the HIARC since new studies were submitted. RAB1 toxicologists and risk assessment team also reevaluated FQPA assessments. The risk assessment team concluded that the default 10x FQPA Safety Factor (SF) should be reduced to 1x when assessing acute and chronic dietary exposures (M.Sahafeyan, D333320, 09-AUG-07). The relevant endpoints are shown in Table 3.

In accordance with HED’s current policy and EPA’s 2005 Cancer Guidelines, difenoconazole is classified as “Suggestive Evidence of Carcinogenic Potential,” based on excessive toxicity observed at the two highest doses, the absence of tumors at the lower doses and the absence of genotoxic effects. A margin-of-exposure (MOE) approach in risk assessment was advocated by HED’s CPRC in 1994. Use of an MOE approach was reviewed and reaffirmed in 2007 by the CPRC Chair (PV Shah, 3/1/07, HED Doc. No. 0054532). Therefore, a separate cancer dietary assessment is not being conducted for difenoconazole.

Table 3. Summary of Toxicological Doses and Endpoints for Difenoconazole for Use in Dietary Risk Assessments.				
Exposure Scenario	Point of Departure	Uncertainty/FQPA Safety Factors	RfD, PAD, for Risk Assessment	Study and Relevant Toxicological Effects
Acute Dietary (All populations)	NOAEL = 25 mg/kg	UF _A = 10X UF _H = 10X FQPA SF = 1X	aRfD = aPAD = 0.25 mg/kg/day	Acute Neurotoxicity Study in Rats LOAEL= 200 mg/kg in males based on reduced fore-limb grip strength in males on day 1.
Chronic Dietary (All populations)	NOAEL = 0.96 mg/kg/day	UF _A = 10X UF _H = 10X FQPA SF = 1X	cRfD = cPAD = 0.01mg/kg/day	Combined chronic toxicity/carcinogenicity (rat; dietary) LOAEL = 24.1/32.8 mg/kg/day (M/F) based on cumulative decreases in body-weight gains.
Cancer (oral, dermal, inhalation)	Difenoconazole is classified as a Group C, possible human carcinogen with a non-linear (MOE) approach for human risk characterization (CPRC Document, 7/27/94, Memo, P. V. Shah dated March 3, 2007, HED Doc. No. 0054532). The chronic dietary exposure assessment is protective of cancer effects.			

Point of Departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no observed adverse effect level. LOAEL = lowest observed adverse effect level. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose.

VII. Results/Discussion

As stated above, for acute and chronic assessments, HED is concerned when dietary risk exceeds 100% of the aPAD or cPAD, respectively. The following paragraphs are summaries of the DEEM-FCID (ver. 2.03) acute and chronic exposure analyses.

Acute and chronic aggregate (food + water) analyses were performed using DEEM-FCID estimating the dietary exposure of the U.S. population and various population subgroups. The results are summarized in Tables 4 and 5 below for acute and chronic analyses respectively.

The resulting acute food exposure estimates were less than HED's level of concern (<100% aPAD) at the 95th percentile of the exposure distribution for general US population (15 % aPAD) and all population sub-groups; the most highly exposed population subgroup was All Infants <1 year old with 49 % aPAD. The resulting chronic food exposure estimates were less than HED's level of concern (<100% cPAD) for the general U.S. population (26 % cPAD) and all population sub-groups; the most highly exposed population subgroup was children 1-2 years old with 88 % cPAD. A separate cancer dietary assessment was not conducted for difenoconazole because the cancer NOAEL is higher than the chronic RfD; therefore, the chronic dietary risk estimate is considered protective of all chronic effects including carcinogenicity.

Table 4. Summary of Acute Dietary (Food plus Water) Exposure and Risk for Difenoconazole at the 95th Percentile.

Population Subgroup	aPAD (mg/kg/day)	Exposure (mg/kg/day)	%aPAD
General U.S. Population	0.25	0.038393	15
All Infants (< 1 year old)		0.122946	49
Children 1-2 years old		0.108065	43
Children 3-5 years old		0.074001	30
Children 6-12 years old		0.050176	20
Youth 13-19 years old		0.024832	9.9
Adults 20-49 years old		0.025978	10
Adults 50-99 years old		0.028841	12
Females 13-49 years old		0.025939	10

The bolded %aPAD is the highest.

Table 5. Summary of Chronic Dietary (Food plus Water) Exposure and Risk for Difenoconazole.

Population Subgroup	cPAD (mg/kg/day)	Exposure (mg/kg/day)	%cPAD
General U.S. Population	0.01	0.002554	26
All Infants (< 1 year old)		0.007683	77
Children 1-2 years old		0.008828	88
Children 3-5 years old		0.006009	60
Children 6-12 years old		0.003676	37
Youth 13-19 years old		0.001980	20
Adults 20-49 years old		0.001847	19
Adults 50-99 years old		0.002068	21
Females 13-49 years old		0.001814	18

The bolded %cPAD is the highest.

VIII. Characterization of Inputs/Outputs

The acute analysis assumed tolerance-level residues, 100% CT, and empirical or DEEM default processing factors. The chronic analysis assumed tolerance-level residues for some commodities, average field trial residues and USDA PDP monitoring data for the remaining commodities, average % CT, and empirical or DEEM default processing factors. Therefore, these analyses are considered refined. While they could be further refined, further refinement is not warranted as estimated risks are not of concern.

IX. Conclusions

An acute aggregate (food + water) dietary risk assessment was conducted for difenoconazole using the DEEM-FCID Model and assumed tolerance-level residues, 100% CT, and empirical or DEEM default processing factors. The chronic aggregate dietary risk assessment assumed tolerance-level residues for some commodities, average field trial residues and USDA PDP monitoring data for the remaining commodities, average % CT, and empirical or DEEM default processing factors. The resulting acute and chronic aggregate exposure estimates were less than HED's level of concern. For the general U.S. population, the aPAD and cPAD were 11 % and 27 %, respectively. The most highly-exposed population subgroup in the acute (at the 95th percentile of the exposure distribution) was All Infants <1 year old (49 % aPAD) and chronic analysis were children 1-2 years old (88 % cPAD), respectively.

X. List of Attachments

- Attachment 1: DEEM-FCID™ Acute Residue File
- Attachment 2: DEEM-FCID™ Acute Exposure Estimates
- Attachment 3: DEEM-FCID™ Chronic Residue File
- Attachment 4: DEEM-FCID™ Chronic Exposure Estimates
- Attachment 5: Percent Crop Treated Memorandum

cc with all attachments: T. Morton (RABIV)

RDI: P. Savoia and J. Van Alstine - DESAC (16-September-2014); E. Reaves (24-February-2015)

Petition Number(s): 4F8231

PC Code: 128847

T. Morton:S10838:PY1:(703)305-6691

Attachment 1: DEEM-FCID Acute Residue File

Filename: C:\Users\tmorton\Documents\My Files\DEEM Files\128847 Difenoconazole\128847
 Difenoconazole 4F8231 Sept 2014\128847 Acute Sept 2014.R08
 Chemical: Difenoconazole
 RfD(Chronic): .01 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day
 RfD(Acute): .25 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day
 Date created/last modified: 10-16-2014/09:51:23 Program ver. 3.16, 03-08-d

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	Comment #2
0101052000	1A	Beet, sugar	0.300000	1.000	1.000
0101052001	1A	Beet, sugar-babyfood	0.300000	1.000	1.000
0101053000	1A	Beet, sugar, molasses	0.300000	0.600	1.000
0101053001	1A	Beet, sugar, molasses-babyfood	0.300000	0.600	1.000
0101078000	1AB	Carrot	0.500000	1.000	1.000
0101078001	1AB	Carrot-babyfood	0.500000	1.000	1.000
0101079000	1AB	Carrot, juice	0.500000	1.000	1.000
0103015000	1CD	Arrowroot, flour	4.000000	1.000	1.000
0103015001	1CD	Arrowroot, flour-babyfood	4.000000	1.000	1.000
0103017000	1CD	Artichoke, Jerusalem	4.000000	1.000	1.000
0103082000	1CD	Cassava	4.000000	1.000	1.000
0103082001	1CD	Cassava-babyfood	4.000000	1.000	1.000
0103139000	1CD	Dasheen, corm	4.000000	1.000	1.000
0103166000	1CD	Ginger	4.000000	1.000	1.000
0103166001	1CD	Ginger-babyfood	4.000000	1.000	1.000
0103167000	1CD	Ginger, dried	4.000000	1.000	1.000
0103296000	1C	Potato, chips	4.000000	0.500	1.000
0103297000	1C	Potato, dry (granules/ flakes)	4.000000	0.500	1.000
0103297001	1C	Potato, dry (granules/ flakes)-b	4.000000	0.500	1.000
0103298000	1C	Potato, flour	4.000000	0.500	1.000
0103298001	1C	Potato, flour-babyfood	4.000000	0.500	1.000
0103299000	1C	Potato, tuber, w/peel	4.000000	1.000	1.000
0103299001	1C	Potato, tuber, w/peel-babyfood	4.000000	1.000	1.000
0103300000	1C	Potato, tuber, w/o peel	4.000000	1.000	1.000
0103300001	1C	Potato, tuber, w/o peel-babyfood	4.000000	1.000	1.000
0103366000	1CD	Sweet potato	4.000000	1.000	1.000
0103366001	1CD	Sweet potato-babyfood	4.000000	1.000	1.000
0103371000	1CD	Tanier, corm	4.000000	1.000	1.000
0103387000	1CD	Turmeric	4.000000	1.000	1.000
0103406000	1CD	Yam, true	4.000000	1.000	1.000
0103407000	1CD	Yam bean	4.000000	1.000	1.000
0301165000	3A	Garlic, bulb	0.200000	1.000	1.000
0301165001	3A	Garlic, bulb-babyfood	0.200000	1.000	1.000
0301237000	3A	Onion, bulb	0.200000	1.000	1.000
0301237001	3A	Onion, bulb-babyfood	0.200000	1.000	1.000
0301238000	3A	Onion, bulb, dried	0.200000	9.000	1.000
0301238001	3A	Onion, bulb, dried-babyfood	0.200000	9.000	1.000
0301338000	3A	Shallot, bulb	0.200000	1.000	1.000
0302103000	3B	Chive, fresh leaves	6.000000	1.000	1.000
0302198000	3B	Leek	6.000000	1.000	1.000
0302239000	3B	Onion, green	6.000000	1.000	1.000
0302338500	3B	Shallot, fresh leaves	6.000000	1.000	1.000
0501061000	5A	Broccoli	1.900000	1.000	1.000
0501061001	5A	Broccoli-babyfood	1.900000	1.000	1.000
0501062000	5A	Broccoli, Chinese	1.900000	1.000	1.000
0501064000	5A	Brussels sprouts	1.900000	1.000	1.000
0501069000	5A	Cabbage	1.900000	1.000	1.000
0501071000	5A	Cabbage, Chinese, napa	1.900000	1.000	1.000
0501072000	5A	Cabbage, Chinese, mustard	1.900000	1.000	1.000
0501083000	5A	Cauliflower	1.900000	1.000	1.000
0501196000	5A	Kohlrabi	1.900000	1.000	1.000
0502063000	5B	Broccoli raab	35.000000	1.000	1.000
0502070000	5B	Cabbage, Chinese, bok choy	35.000000	1.000	1.000
0502117000	5B	Collards	35.000000	1.000	1.000
0502194000	5B	Kale	35.000000	1.000	1.000
0502229000	5B	Mustard greens	35.000000	1.000	1.000
0502318000	5B	Rape greens	35.000000	1.000	1.000
0502389000	5B	Turnip, greens	35.000000	1.000	1.000
0600347000	6	Soybean, seed	0.150000	1.000	1.000
0600349000	6	Soybean, soy milk	0.150000	1.000	1.000
0600349001	6	Soybean, soy milk-babyfood or in	0.150000	1.000	1.000
0600350000	6	Soybean, oil	0.150000	1.000	1.000
0600350001	6	Soybean, oil-babyfood	0.150000	1.000	1.000
0601349500	6AB	Soybean, vegetable	0.150000	1.000	1.000
0603030000	6C	Bean, black, seed	0.200000	1.000	1.000

0603032000	6C	Bean, broad, seed	0.200000	1.000	1.000
0603034000	6C	Bean, cowpea, seed	0.200000	1.000	1.000
0603035000	6C	Bean, great northern, seed	0.200000	1.000	1.000
0603036000	6C	Bean, kidney, seed	0.200000	1.000	1.000
0603038000	6C	Bean, lima, seed	0.200000	1.000	1.000
0603039000	6C	Bean, mung, seed	0.200000	1.000	1.000
0603040000	6C	Bean, navy, seed	0.200000	1.000	1.000
0603041000	6C	Bean, pink, seed	0.200000	1.000	1.000
0603042000	6C	Bean, pinto, seed	0.200000	1.000	1.000
0603098000	6C	Chickpea, seed	0.200000	1.000	1.000
0603098001	6C	Chickpea, seed-babyfood	0.200000	1.000	1.000
0603099000	6C	Chickpea, flour	0.200000	1.000	1.000
0603182000	6C	Guar, seed	0.200000	1.000	1.000
0603182001	6C	Guar, seed-babyfood	0.200000	1.000	1.000
0603203000	6C	Lentil, seed	0.200000	1.000	1.000
0603256000	6C	Pea, dry	0.200000	1.000	1.000
0603256001	6C	Pea, dry-babyfood	0.200000	1.000	1.000
0603258000	6C	Pea, pigeon, seed	0.200000	1.000	1.000
0603348000	6C	Soybean, flour	0.150000	1.000	1.000
0603348001	6C	Soybean, flour-babyfood	0.150000	1.000	1.000
0801374000	8A	Tomatillo	0.600000	1.000	1.000
0801375000	8A	Tomato	0.600000	1.000	1.000
0801375001	8A	Tomato-babyfood	0.600000	1.000	1.000
0801376000	8A	Tomato, paste	0.600000	1.600	1.000
0801376001	8A	Tomato, paste-babyfood	0.600000	1.600	1.000
0801377000	8A	Tomato, puree	0.600000	0.500	1.000
0801377001	8A	Tomato, puree-babyfood	0.600000	0.500	1.000
0801378000	8A	Tomato, dried	0.600000	14.300	1.000
0801378001	8A	Tomato, dried-babyfood	0.600000	14.300	1.000
0801379000	8A	Tomato, juice	0.600000	1.500	1.000
0801380000	8A	Tomato, Tree	0.600000	1.000	1.000
0802148000	8BC	Eggplant	0.600000	1.000	1.000
0802234000	8BC	Okra	0.600000	1.000	1.000
0802270000	8B	Pepper, bell	0.600000	1.000	1.000
0802270001	8B	Pepper, bell-babyfood	0.600000	1.000	1.000
0802271000	8B	Pepper, bell, dried	0.600000	1.000	1.000
0802271001	8B	Pepper, bell, dried-babyfood	0.600000	1.000	1.000
0802272000	8BC	Pepper, nonbell	0.600000	1.000	1.000
0802272001	8BC	Pepper, nonbell-babyfood	0.600000	1.000	1.000
0802273000	8BC	Pepper, nonbell, dried	0.600000	1.000	1.000
0901075000	9A	Cantaloupe	0.700000	1.000	1.000
0901187000	9A	Honeydew melon	0.700000	1.000	1.000
0901399000	9A	Watermelon	0.700000	1.000	1.000
0901400000	9A	Watermelon, juice	0.700000	1.000	1.000
0902021000	9B	Balsam pear	0.700000	1.000	1.000
0902088000	9B	Chayote, fruit	0.700000	1.000	1.000
0902102000	9B	Chinese waxgourd	0.700000	1.000	1.000
0902135000	9B	Cucumber	0.700000	1.000	1.000
0902308000	9B	Pumpkin	0.700000	1.000	1.000
0902309000	9B	Pumpkin, seed	0.700000	1.000	1.000
0902356000	9B	Squash, summer	0.700000	1.000	1.000
0902356001	9B	Squash, summer-babyfood	0.700000	1.000	1.000
0902357000	9B	Squash, winter	0.700000	1.000	1.000
0902357001	9B	Squash, winter-babyfood	0.700000	1.000	1.000
1001106000	10A	Citron	0.600000	1.000	1.000
1001107000	10A	Citrus hybrids	0.600000	1.000	1.000
1001108000	10A	Citrus, oil	25.000000	1.000	1.000
1001240000	10A	Orange	0.600000	1.000	1.000
1001241000	10A	Orange, juice	0.600000	0.100	1.000
1001241001	10A	Orange, juice-babyfood	0.600000	0.100	1.000
1001242000	10A	Orange, peel	0.600000	1.000	1.000
1001369000	10A	Tangerine	0.600000	1.000	1.000
1001370000	10A	Tangerine, juice	0.600000	0.100	1.000
1002197000	10B	Kumquat	0.600000	1.000	1.000
1002199000	10B	Lemon	0.600000	1.000	1.000
1002200000	10B	Lemon, juice	0.600000	0.100	1.000
1002200001	10B	Lemon, juice-babyfood	0.600000	0.100	1.000
1002201000	10B	Lemon, peel	0.600000	1.000	1.000
1002206000	10B	Lime	0.600000	1.000	1.000
1002207000	10B	Lime, juice	0.600000	0.100	1.000
1002207001	10B	Lime, juice-babyfood	0.600000	0.100	1.000
1003180000	10C	Grapefruit	0.600000	1.000	1.000
1003181000	10C	Grapefruit, juice	0.600000	0.100	1.000
1003307000	10C	Pummelo	0.600000	1.000	1.000
1100007000	11	Apple, fruit with peel	5.000000	1.000	1.000
1100008000	11	Apple, peeled fruit	5.000000	1.000	1.000
1100008001	11	Apple, peeled fruit-babyfood	5.000000	1.000	1.000
1100009000	11	Apple, dried	5.000000	8.000	1.000

1100009001	11	Apple, dried-babyfood	5.000000	8.000	1.000
1100010000	11	Apple, juice	5.000000	0.040	1.000
1100010001	11	Apple, juice-babyfood	5.000000	0.040	1.000
1100011000	11	Apple, sauce	5.000000	1.000	1.000
1100011001	11	Apple, sauce-babyfood	5.000000	1.000	1.000
11000129000	11	Crabapple	5.000000	1.000	1.000
11000173500	11	Goji berry	5.000000	1.000	1.000
11000210000	11	Loquat	5.000000	1.000	1.000
11000266000	11	Pear	5.000000	1.000	1.000
11000266001	11	Pear-babyfood	5.000000	1.000	1.000
11000267000	11	Pear, dried	5.000000	6.250	1.000
11000268000	11	Pear, juice	5.000000	1.000	1.000
11000268001	11	Pear, juice-babyfood	5.000000	1.000	1.000
11000310000	11	Quince	5.000000	1.000	1.000
1201090000	12A	Cherry	2.500000	1.000	1.000
1201090001	12A	Cherry-babyfood	2.500000	1.000	1.000
1201091000	12A	Cherry, juice	2.500000	1.500	1.000
1201091001	12A	Cherry, juice-babyfood	2.500000	1.500	1.000
1202012000	12B	Apricot	2.500000	1.000	1.000
1202012001	12B	Apricot-babyfood	2.500000	1.000	1.000
1202013000	12B	Apricot, dried	2.500000	6.000	1.000
1202014000	12B	Apricot, juice	2.500000	1.000	1.000
1202014001	12B	Apricot, juice-babyfood	2.500000	1.000	1.000
1202230000	12B	Nectarine	2.500000	1.000	1.000
1202260000	12B	Peach	2.500000	1.000	1.000
1202260001	12B	Peach-babyfood	2.500000	1.000	1.000
1202261000	12B	Peach, dried	2.500000	7.000	1.000
1202261001	12B	Peach, dried-babyfood	2.500000	7.000	1.000
1202262000	12B	Peach, juice	2.500000	1.000	1.000
1202262001	12B	Peach, juice-babyfood	2.500000	1.000	1.000
1203285000	12C	Plum	2.500000	1.000	1.000
1203285001	12C	Plum-babyfood	2.500000	1.000	1.000
1203286000	12C	Plum, prune, fresh	2.500000	1.000	1.000
1203286001	12C	Plum, prune, fresh-babyfood	2.500000	1.000	1.000
1203287000	12C	Plum, prune, dried	2.500000	5.000	1.000
1203287001	12C	Plum, prune, dried-babyfood	2.500000	5.000	1.000
1203288000	12C	Plum, prune, juice	2.500000	1.400	1.000
1203288001	12C	Plum, prune, juice-babyfood	2.500000	1.400	1.000
1302057000	13B	Blueberry	4.000000	1.000	1.000
1302057001	13B	Blueberry-babyfood	4.000000	1.000	1.000
1302136000	13B	Currant	4.000000	1.000	1.000
1302137000	13B	Currant, dried	4.000000	1.000	1.000
1302149000	13B	Elderberry	4.000000	1.000	1.000
1302174000	13B	Gooseberry	4.000000	1.000	1.000
1302191000	13B	Huckleberry	4.000000	1.000	1.000
1304175000	13D	Grape	4.000000	1.000	1.000
1304176000	13D	Grape, juice	4.000000	0.200	1.000
1304176001	13D	Grape, juice-babyfood	4.000000	0.200	1.000
1304179000	13D	Grape, wine and sherry	4.000000	1.000	1.000
1307130000	13G	Cranberry	4.000000	1.000	1.000
1307130001	13G	Cranberry-babyfood	4.000000	1.000	1.000
1307131000	13G	Cranberry, dried	4.000000	1.000	1.000
1307132000	13G	Cranberry, juice	4.000000	1.100	1.000
1307132001	13G	Cranberry, juice-babyfood	4.000000	1.100	1.000
1307359000	13G	Strawberry	2.500000	1.000	1.000
1307359001	13G	Strawberry-babyfood	2.500000	1.000	1.000
1307360000	13G	Strawberry, juice	2.500000	1.000	1.000
1307360001	13G	Strawberry, juice-babyfood	2.500000	1.000	1.000
1400003000	14	Almond	0.030000	1.000	1.000
1400003001	14	Almond-babyfood	0.030000	1.000	1.000
1400004000	14	Almond, oil	0.030000	1.000	1.000
1400004001	14	Almond, oil-babyfood	0.030000	1.000	1.000
1400059000	14	Brazil nut	0.030000	1.000	1.000
1400068000	14	Butternut	0.030000	1.000	1.000
1400081000	14	Cashew	0.030000	1.000	1.000
1400092000	14	Chestnut	0.030000	1.000	1.000
1400155000	14	Hazelnut	0.030000	1.000	1.000
1400156000	14	Hazelnut, oil	0.030000	1.000	1.000
1400185000	14	Hickory nut	0.030000	1.000	1.000
1400213000	14	Macadamia nut	0.030000	1.000	1.000
1400269000	14	Pecan	0.030000	1.000	1.000
1400278000	14	Pine nut	0.030000	1.000	1.000
1400282000	14	Pistachio	0.030000	1.000	1.000
1400391000	14	Walnut	0.030000	1.000	1.000
1500025000	15	Barley, pearled barley	0.100000	1.000	1.000
1500025001	15	Barley, pearled barley-babyfood	0.100000	1.000	1.000
1500026000	15	Barley, flour	0.100000	1.000	1.000
1500026001	15	Barley, flour-babyfood	0.100000	1.000	1.000

1500027000	15	Barley, bran	0.100000	1.000	1.000
1500127000	15	Corn, sweet	0.010000	1.000	1.000
1500127001	15	Corn, sweet-babyfood	0.010000	1.000	1.000
1500231000	15	Oat, bran	0.010000	1.000	1.000
1500232000	15	Oat, flour	0.010000	1.000	1.000
1500232001	15	Oat, flour-babyfood	0.010000	1.000	1.000
1500233000	15	Oat, groats/rolled oats	0.010000	1.000	1.000
1500233001	15	Oat, groats/rolled oats-babyfood	0.010000	1.000	1.000
1500328000	15	Rye, grain	0.010000	1.000	1.000
1500329000	15	Rye, flour	0.010000	1.000	1.000
1500381000	15	Triticale, flour	0.100000	1.000	1.000
1500381001	15	Triticale, flour-babyfood	0.100000	1.000	1.000
1500401000	15	Wheat, grain	0.100000	1.000	1.000
1500401001	15	Wheat, grain-babyfood	0.100000	1.000	1.000
1500402000	15	Wheat, flour	0.100000	1.000	1.000
1500402001	15	Wheat, flour-babyfood	0.100000	1.000	1.000
1500403000	15	Wheat, germ	0.100000	1.000	1.000
1500404000	15	Wheat, bran	0.100000	1.000	1.000
2001163000	20A	Flax seed, oil	0.100000	1.000	1.000
2001319000	20A	Rapeseed, oil	0.100000	1.000	1.000
2001319001	20A	Rapeseed, oil-babyfood	0.100000	1.000	1.000
2001336000	20A	Sesame, seed	0.100000	1.000	1.000
2001336001	20A	Sesame, seed-babyfood	0.100000	1.000	1.000
2001337000	20A	Sesame, oil	0.100000	1.000	1.000
2001337001	20A	Sesame, oil-babyfood	0.100000	1.000	1.000
2003128000	20C	Cottonseed, oil	0.050000	1.000	1.000
2003128001	20C	Cottonseed, oil-babyfood	0.050000	1.000	1.000
3100044000	31	Beef, meat	0.050000	1.000	1.000
3100044001	31	Beef, meat-babyfood	0.050000	1.000	1.000
3100045000	31	Beef, meat, dried	0.050000	1.920	1.000
3100046000	31	Beef, meat byproducts	0.100000	1.000	1.000
3100046001	31	Beef, meat byproducts-babyfood	0.100000	1.000	1.000
3100047000	31	Beef, fat	0.100000	1.000	1.000
3100047001	31	Beef, fat-babyfood	0.100000	1.000	1.000
3100048000	31	Beef, kidney	0.100000	1.000	1.000
3100049000	31	Beef, liver	0.400000	1.000	1.000
3100049001	31	Beef, liver-babyfood	0.400000	1.000	1.000
3200169000	32	Goat, meat	0.050000	1.000	1.000
3200170000	32	Goat, meat byproducts	0.100000	1.000	1.000
3200171000	32	Goat, fat	0.100000	1.000	1.000
3200172000	32	Goat, kidney	0.100000	1.000	1.000
3200173000	32	Goat, liver	0.400000	1.000	1.000
3300189000	33	Horse, meat	0.050000	1.000	1.000
3400290000	34	Pork, meat	0.050000	1.000	1.000
3400290001	34	Pork, meat-babyfood	0.050000	1.000	1.000
3400291000	34	Pork, skin	0.100000	1.000	1.000
3400292000	34	Pork, meat byproducts	0.100000	1.000	1.000
3400292001	34	Pork, meat byproducts-babyfood	0.100000	1.000	1.000
3400293000	34	Pork, fat	0.100000	1.000	1.000
3400293001	34	Pork, fat-babyfood	0.100000	1.000	1.000
3400294000	34	Pork, kidney	0.100000	1.000	1.000
3400295000	34	Pork, liver	0.400000	1.000	1.000
3500339000	35	Sheep, meat	0.050000	1.000	1.000
3500339001	35	Sheep, meat-babyfood	0.050000	1.000	1.000
3500340000	35	Sheep, meat byproducts	0.100000	1.000	1.000
3500341000	35	Sheep, fat	0.100000	1.000	1.000
3500341001	35	Sheep, fat-babyfood	0.100000	1.000	1.000
3500342000	35	Sheep, kidney	0.100000	1.000	1.000
3500343000	35	Sheep, liver	0.400000	1.000	1.000
3600222000	36	Milk, fat	0.020000	1.000	1.000
3600222001	36	Milk, fat-baby food/infant formula	0.020000	1.000	1.000
3600223000	36	Milk, nonfat solids	0.020000	1.000	1.000
3600223001	36	Milk, nonfat solids-baby food/in	0.020000	1.000	1.000
3600224000	36	Milk, water	0.020000	1.000	1.000
3600224001	36	Milk, water-babyfood/infant form	0.020000	1.000	1.000
3600225001	36	Milk, sugar (lactose)-baby food/	0.020000	1.000	1.000
7000145000	70	Egg, whole	0.020000	1.000	1.000
7000145001	70	Egg, whole-babyfood	0.020000	1.000	1.000
7000146000	70	Egg, white	0.020000	1.000	1.000
7000146001	70	Egg, white (solids)-babyfood	0.020000	1.000	1.000
7000147000	70	Egg, yolk	0.020000	1.000	1.000
7000147001	70	Egg, yolk-babyfood	0.020000	1.000	1.000
8601000000	86A	Water, direct, all sources	0.020000	1.000	1.000
8602000000	86B	Water, indirect, all sources	0.020000	1.000	1.000
9500023000	O	Banana	0.200000	1.000	1.000
9500023001	O	Banana-babyfood	0.200000	1.000	1.000
9500024000	O	Banana, dried	0.200000	3.900	1.000
9500024001	O	Banana, dried-babyfood	0.200000	3.900	1.000

9500177000 O	Grape, leaves	4.000000	1.000	1.000
9500178000 O	Grape, raisin	6.000000	1.000	1.000
9500215000 O	Mango	0.070000	1.000	1.000
9500215001 O	Mango-babyfood	0.070000	1.000	1.000
9500216000 O	Mango, dried	0.070000	1.000	1.000
9500217000 O	Mango, juice	0.070000	1.000	1.000
9500217001 O	Mango, juice-babyfood	0.070000	1.000	1.000
9500245000 O	Papaya	0.300000	1.000	1.000
9500245001 O	Papaya-babyfood	0.300000	1.000	1.000
9500246000 O	Papaya, dried	0.300000	1.800	1.000
9500247000 O	Papaya, juice	0.300000	1.500	1.000
9500283000 O	Plantain	0.200000	1.000	1.000
9500284000 O	Plantain, dried	0.200000	3.900	1.000

Attachment 2: DEEM-FCID Acute Exposure Estimates

US EPA Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for DIFENOCONAZOLE NHANES 2003-2008 2-Day
Residue file: 128847 Acute Sept 2014.R08 Adjustment factor #2 used.
Analysis Date: 02-24-2015/07:13:19 Residue file dated: 10-16-2014/09:51:23
RAC/FF intake summed over 24 hours
Run Comment: ""
=====

Summary calculations--per capita:

	95th Percentile Exposure	% aRfD	99th Percentile Exposure	% aRfD	99.9th Percentile Exposure	% aRfD
Total US Population:	0.038393	15.36	0.080503	32.20	0.159163	63.67
All Infants:	0.122946	49.18	0.188019	75.21	0.266271	106.51
Children 1-2:	0.108065	43.23	0.167396	66.96	0.407441	162.98
Children 3-5:	0.074001	29.60	0.120143	48.06	0.230017	92.01
Children 6-12:	0.050176	20.07	0.084194	33.68	0.145195	58.08
Youth 13-19:	0.024832	9.93	0.043239	17.30	0.121900	48.76
Adults 20-49:	0.025978	10.39	0.044412	17.76	0.102809	41.12
Adults 50-99:	0.028841	11.54	0.058172	23.27	0.127048	50.82
Female 13-49:	0.025939	10.38	0.044395	17.76	0.103499	41.40

FOOD ONLY

US EPA Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for DIFENOCONAZOLE NHANES 2003-2008 2-Day
Residue file: 128847 Acute Sept 2014 Food Only.R08 Adjustment factor #2 used.
Analysis Date: 02-24-2015/07:08:32 Residue file dated: 02-24-2015/07:06:21
RAC/FF intake summed over 24 hours
Run Comment: ""
=====

Summary calculations--per capita:

	95th Percentile Exposure	% aRfD	99th Percentile Exposure	% aRfD	99.9th Percentile Exposure	% aRfD
Total US Population:	0.037881	15.15	0.079960	31.98	0.158184	63.27
All Infants:	0.121522	48.61	0.185721	74.29	0.265664	106.27
Children 1-2:	0.107552	43.02	0.166250	66.50	0.404915	161.97
Children 3-5:	0.073500	29.40	0.118901	47.56	0.228389	91.36
Children 6-12:	0.049825	19.93	0.083096	33.24	0.145125	58.05
Youth 13-19:	0.024464	9.79	0.042631	17.05	0.121952	48.78
Adults 20-49:	0.025354	10.14	0.043922	17.57	0.102618	41.05
Adults 50-99:	0.028255	11.30	0.057708	23.08	0.126734	50.69
Female 13-49:	0.025424	10.17	0.043839	17.54	0.102408	40.96

Attachment 3: DEEM-FCID Chronic Residue File

Filename: C:\Users\tmorton\Documents\My Files\DEEM Files\128847 Difenoconazole\128847 Difenoconazole 4F8231 Sept 2014\128847Chronic Sept 2014 AVG FT PDP percent CT.R08
 Chemical: Difenoconazole
 RfD(Chronic): .01 mg/kg bw/day NOEL(Chronic): 0 mg/kg bw/day
 RfD(Acute): .25 mg/kg bw/day NOEL(Acute): 0 mg/kg bw/day
 Date created/last modified: 10-08-2014/07:58:46 Program ver. 3.16, 03-08-d

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	Comment #2
0101052000	1A	Beet, sugar	0.300000	1.000	0.150
0101052001	1A	Beet, sugar-babyfood	0.300000	1.000	0.150
0101053000	1A	Beet, sugar, molasses	0.300000	0.600	0.150
0101053001	1A	Beet, sugar, molasses-babyfood	0.300000	0.600	0.150
0101078000	1AB	Carrot	0.007000	1.000	1.000
0101078001	1AB	Carrot-babyfood	0.007000	1.000	1.000
0101079000	1AB	Carrot, juice	0.007000	1.000	1.000
0103015000	1CD	Arrowroot, flour	1.360000	1.000	1.000
0103015001	1CD	Arrowroot, flour-babyfood	1.360000	1.000	1.000
0103017000	1CD	Artichoke, Jerusalem	1.360000	1.000	1.000
0103082000	1CD	Cassava	1.360000	1.000	1.000
0103082001	1CD	Cassava-babyfood	1.360000	1.000	1.000
0103139000	1CD	Dasheen, corm	1.360000	1.000	1.000
0103166000	1CD	Ginger	1.360000	1.000	1.000
0103166001	1CD	Ginger-babyfood	1.360000	1.000	1.000
0103167000	1CD	Ginger, dried	1.360000	1.000	1.000
0103296000	1C	Potato, chips	1.360000	0.500	1.000
0103297000	1C	Potato, dry (granules/ flakes)	1.360000	0.500	1.000
0103297001	1C	Potato, dry (granules/ flakes)-b	1.360000	0.500	1.000
0103298000	1C	Potato, flour	1.360000	0.500	1.000
0103298001	1C	Potato, flour-babyfood	1.360000	0.500	1.000
0103299000	1C	Potato, tuber, w/peel	1.360000	1.000	1.000
0103299001	1C	Potato, tuber, w/peel-babyfood	1.360000	1.000	1.000
0103300000	1C	Potato, tuber, w/o peel	1.360000	1.000	1.000
0103300001	1C	Potato, tuber, w/o peel-babyfood	1.360000	1.000	1.000
0103366000	1CD	Sweet potato	1.360000	1.000	1.000
0103366001	1CD	Sweet potato-babyfood	1.360000	1.000	1.000
0103371000	1CD	Tanier, corm	1.360000	1.000	1.000
0103387000	1CD	Turmeric	1.360000	1.000	1.000
0103406000	1CD	Yam, true	1.360000	1.000	1.000
0103407000	1CD	Yam bean	1.360000	1.000	1.000
0301165000	3A	Garlic, bulb	0.005000	1.000	0.050
0301165001	3A	Garlic, bulb-babyfood	0.005000	1.000	0.050
0301237000	3A	Onion, bulb	0.005000	1.000	0.050
0301237001	3A	Onion, bulb-babyfood	0.005000	1.000	0.050
0301238000	3A	Onion, bulb, dried	0.005000	9.000	0.050
0301238001	3A	Onion, bulb, dried-babyfood	0.005000	9.000	0.050
0301338000	3A	Shallot, bulb	0.005000	1.000	1.000
0302103000	3B	Chive, fresh leaves	6.000000	1.000	1.000
0302198000	3B	Leek	6.000000	1.000	1.000
0302239000	3B	Onion, green	6.000000	1.000	0.050
0302338500	3B	Shallot, fresh leaves	6.000000	1.000	1.000
0501061000	5A	Broccoli	0.003000	1.000	1.000
0501061001	5A	Broccoli-babyfood	0.003000	1.000	1.000
0501062000	5A	Broccoli, Chinese	0.003000	1.000	1.000
0501064000	5A	Brussels sprouts	0.029000	1.000	1.000
0501069000	5A	Cabbage	0.029000	1.000	0.025
0501071000	5A	Cabbage, Chinese, napa	0.029000	1.000	1.000
0501072000	5A	Cabbage, Chinese, mustard	0.003000	1.000	1.000
0501083000	5A	Cauliflower	0.003000	1.000	1.000
0501196000	5A	Kohlrabi	0.029000	1.000	1.000
0502063000	5B	Broccoli raab	5.100000	1.000	1.000
0502070000	5B	Cabbage, Chinese, bok choy	5.100000	1.000	1.000
0502117000	5B	Collards	5.100000	1.000	1.000
0502194000	5B	Kale	5.100000	1.000	1.000
0502229000	5B	Mustard greens	5.100000	1.000	1.000
0502318000	5B	Rape greens	5.100000	1.000	1.000
0502389000	5B	Turnip, greens	5.100000	1.000	1.000
0600347000	6	Soybean, seed	0.021500	1.000	1.000
0600349000	6	Soybean, soy milk	0.021500	1.000	1.000
0600349001	6	Soybean, soy milk-babyfood or in	0.021500	1.000	1.000
0600350000	6	Soybean, oil	0.021500	1.000	1.000
0600350001	6	Soybean, oil-babyfood	0.021500	1.000	1.000
0601349500	6AB	Soybean, vegetable	0.021500	1.000	1.000
0603030000	6C	Bean, black, seed	0.014000	1.000	1.000

0603032000	6C	Bean, broad, seed	0.014000	1.000	1.000
0603034000	6C	Bean, cowpea, seed	0.014000	1.000	1.000
0603035000	6C	Bean, great northern, seed	0.014000	1.000	1.000
0603036000	6C	Bean, kidney, seed	0.014000	1.000	1.000
0603038000	6C	Bean, lima, seed	0.014000	1.000	1.000
0603039000	6C	Bean, mung, seed	0.014000	1.000	1.000
0603040000	6C	Bean, navy, seed	0.014000	1.000	1.000
0603041000	6C	Bean, pink, seed	0.014000	1.000	1.000
0603042000	6C	Bean, pinto, seed	0.014000	1.000	1.000
0603098000	6C	Chickpea, seed	0.034000	1.000	1.000
0603098001	6C	Chickpea, seed-babyfood	0.034000	1.000	1.000
0603099000	6C	Chickpea, flour	0.034000	1.000	1.000
0603182000	6C	Guar, seed	0.014000	1.000	1.000
0603182001	6C	Guar, seed-babyfood	0.014000	1.000	1.000
0603203000	6C	Lentil, seed	0.034000	1.000	1.000
0603256000	6C	Pea, dry	0.034000	1.000	1.000
0603256001	6C	Pea, dry-babyfood	0.034000	1.000	1.000
0603258000	6C	Pea, pigeon, seed	0.034000	1.000	1.000
0603348000	6C	Soybean, flour	0.021500	1.000	1.000
0603348001	6C	Soybean, flour-babyfood	0.021500	1.000	1.000
0801374000	8A	Tomatillo	0.165000	1.000	1.000
0801375000	8A	Tomato	0.165000	1.000	0.250
0801375001	8A	Tomato-babyfood	0.165000	1.000	0.250
0801376000	8A	Tomato, paste	0.165000	1.600	0.250
0801376001	8A	Tomato, paste-babyfood	0.165000	1.600	0.250
0801377000	8A	Tomato, puree	0.165000	0.500	0.250
0801377001	8A	Tomato, puree-babyfood	0.165000	0.500	0.250
0801378000	8A	Tomato, dried	0.165000	14.300	0.250
0801378001	8A	Tomato, dried-babyfood	0.165000	14.300	0.250
0801379000	8A	Tomato, juice	0.165000	1.500	0.250
0801380000	8A	Tomato, Tree	0.165000	1.000	1.000
0802148000	8BC	Eggplant	0.133000	1.000	1.000
0802234000	8BC	Okra	0.600000	1.000	1.000
0802270000	8B	Pepper, bell	0.133000	1.000	0.025
0802270001	8B	Pepper, bell-babyfood	0.133000	1.000	0.025
0802271000	8B	Pepper, bell, dried	0.133000	1.000	0.025
0802271001	8B	Pepper, bell, dried-babyfood	0.133000	1.000	0.025
0802272000	8BC	Pepper, nonbell	0.133000	1.000	0.025
0802272001	8BC	Pepper, nonbell-babyfood	0.133000	1.000	0.025
0802273000	8BC	Pepper, nonbell, dried	0.133000	1.000	0.025
0901075000	9A	Cantaloupe	0.005000	1.000	0.025
0901187000	9A	Honeydew melon	0.005000	1.000	1.000
0901399000	9A	Watermelon	0.005000	1.000	0.050
0901400000	9A	Watermelon, juice	0.005000	1.000	0.050
0902021000	9B	Balsam pear	0.055000	1.000	1.000
0902088000	9B	Chayote, fruit	0.031000	1.000	1.000
0902102000	9B	Chinese waxgourd	0.055000	1.000	1.000
0902135000	9B	Cucumber	0.055000	1.000	0.050
0902308000	9B	Pumpkin	0.011000	1.000	0.025
0902309000	9B	Pumpkin, seed	0.011000	1.000	0.025
0902356000	9B	Squash, summer	0.011000	1.000	0.050
0902356001	9B	Squash, summer-babyfood	0.011000	1.000	0.050
0902357000	9B	Squash, winter	0.011000	1.000	0.050
0902357001	9B	Squash, winter-babyfood	0.011000	1.000	0.050
1001106000	10A	Citron	0.005000	1.000	1.000
1001107000	10A	Citrus hybrids	0.005000	1.000	1.000
1001108000	10A	Citrus, oil	0.005000	1.000	1.000
1001240000	10A	Orange	0.005000	1.000	0.025
1001241000	10A	Orange, juice	0.005000	0.100	0.025
1001241001	10A	Orange, juice-babyfood	0.005000	0.100	0.025
1001242000	10A	Orange, peel	0.005000	1.000	0.025
1001369000	10A	Tangerine	0.005000	1.000	0.025
1001370000	10A	Tangerine, juice	0.005000	0.100	0.025
1002197000	10B	Kumquat	0.005000	1.000	1.000
1002199000	10B	Lemon	0.005000	1.000	1.000
1002200000	10B	Lemon, juice	0.005000	0.100	1.000
1002200001	10B	Lemon, juice-babyfood	0.005000	0.100	1.000
1002201000	10B	Lemon, peel	0.005000	1.000	1.000
1002206000	10B	Lime	0.005000	1.000	1.000
1002207000	10B	Lime, juice	0.005000	0.100	1.000
1002207001	10B	Lime, juice-babyfood	0.005000	0.100	1.000
1003180000	10C	Grapefruit	0.005000	1.000	0.025
1003181000	10C	Grapefruit, juice	0.005000	0.100	0.025
1003307000	10C	Pummelo	0.005000	1.000	1.000
1100007000	11	Apple, fruit with peel	1.420000	1.000	1.000
1100008000	11	Apple, peeled fruit	1.420000	1.000	1.000
1100008001	11	Apple, peeled fruit-babyfood	1.420000	1.000	1.000
1100009000	11	Apple, dried	1.420000	8.000	1.000

1100009001	11	Apple, dried-babyfood	1.420000	8.000	1.000
1100010000	11	Apple, juice	1.420000	0.040	1.000
1100010001	11	Apple, juice-babyfood	1.420000	0.040	1.000
1100011000	11	Apple, sauce	1.420000	1.000	1.000
1100011001	11	Apple, sauce-babyfood	1.420000	1.000	1.000
11000129000	11	Crabapple	1.420000	1.000	1.000
11000173500	11	Goji berry	1.350000	1.000	1.000
11000210000	11	Loquat	1.350000	1.000	1.000
11000266000	11	Pear	1.350000	1.000	1.000
11000266001	11	Pear-babyfood	1.350000	1.000	1.000
11000267000	11	Pear, dried	1.350000	6.250	1.000
11000268000	11	Pear, juice	1.350000	1.000	1.000
11000268001	11	Pear, juice-babyfood	1.350000	1.000	1.000
11000310000	11	Quince	1.350000	1.000	1.000
1201090000	12A	Cherry	0.622000	1.000	1.000
1201090001	12A	Cherry-babyfood	0.622000	1.000	1.000
1201091000	12A	Cherry, juice	0.622000	1.500	1.000
1201091001	12A	Cherry, juice-babyfood	0.622000	1.500	1.000
1202012000	12B	Apricot	0.038000	1.000	1.000
1202012001	12B	Apricot-babyfood	0.038000	1.000	1.000
1202013000	12B	Apricot, dried	0.038000	6.000	1.000
1202014000	12B	Apricot, juice	0.038000	1.000	1.000
1202014001	12B	Apricot, juice-babyfood	0.038000	1.000	1.000
1202230000	12B	Nectarine	0.004000	1.000	1.000
1202260000	12B	Peach	0.038000	1.000	0.010
1202260001	12B	Peach-babyfood	0.038000	1.000	0.010
1202261000	12B	Peach, dried	0.038000	7.000	0.010
1202261001	12B	Peach, dried-babyfood	0.038000	7.000	0.010
1202262000	12B	Peach, juice	0.038000	1.000	0.010
1202262001	12B	Peach, juice-babyfood	0.038000	1.000	0.010
1203285000	12C	Plum	0.005000	1.000	1.000
1203285001	12C	Plum-babyfood	0.005000	1.000	1.000
1203286000	12C	Plum, prune, fresh	0.005000	1.000	1.000
1203286001	12C	Plum, prune, fresh-babyfood	0.005000	1.000	1.000
1203287000	12C	Plum, prune, dried	0.005000	2.600	1.000
1203287001	12C	Plum, prune, dried-babyfood	0.005000	2.600	1.000
1203288000	12C	Plum, prune, juice	0.005000	1.400	1.000
1203288001	12C	Plum, prune, juice-babyfood	0.005000	1.400	1.000
1302057000	13B	Blueberry	1.009000	1.000	1.000
1302057001	13B	Blueberry-babyfood	1.009000	1.000	1.000
1302136000	13B	Currant	1.009000	1.000	1.000
1302137000	13B	Currant, dried	1.009000	1.000	1.000
1302149000	13B	Elderberry	1.009000	1.000	1.000
1302174000	13B	Gooseberry	1.009000	1.000	1.000
1302191000	13B	Huckleberry	1.009000	1.000	1.000
1304175000	13D	Grape	0.613000	1.000	0.050
1304176000	13D	Grape, juice	0.005000	1.000	0.050
1304176001	13D	Grape, juice-babyfood	0.005000	1.000	0.050
1304179000	13D	Grape, wine and sherry	0.613000	1.000	0.050
1307130000	13G	Cranberry	1.009000	1.000	1.000
1307130001	13G	Cranberry-babyfood	1.009000	1.000	1.000
1307131000	13G	Cranberry, dried	1.009000	1.000	1.000
1307132000	13G	Cranberry, juice	1.009000	1.100	1.000
1307132001	13G	Cranberry, juice-babyfood	1.009000	1.100	1.000
1307359000	13G	Strawberry	0.495000	1.000	0.025
1307359001	13G	Strawberry-babyfood	0.495000	1.000	0.025
1307360000	13G	Strawberry, juice	0.495000	1.000	0.025
1307360001	13G	Strawberry, juice-babyfood	0.495000	1.000	0.025
1400003000	14	Almond	0.005000	1.000	0.050
1400003001	14	Almond-babyfood	0.005000	1.000	0.050
1400004000	14	Almond, oil	0.005000	1.000	0.050
1400004001	14	Almond, oil-babyfood	0.005000	1.000	0.050
1400059000	14	Brazil nut	0.007000	1.000	1.000
1400068000	14	Butternut	0.007000	1.000	1.000
1400081000	14	Cashew	0.007000	1.000	1.000
1400092000	14	Chestnut	0.005000	1.000	1.000
1400155000	14	Hazelnut	0.007000	1.000	1.000
1400156000	14	Hazelnut, oil	0.007000	1.000	1.000
1400185000	14	Hickory nut	0.007000	1.000	1.000
1400213000	14	Macadamia nut	0.007000	1.000	1.000
1400269000	14	Pecan	0.007000	1.000	0.025
1400282000	14	Pistachio	0.005000	1.000	0.025
1400391000	14	Walnut	0.007000	1.000	0.025
1500025000	15	Barley, pearled barley	0.100000	1.000	1.000
1500025001	15	Barley, pearled barley-babyfood	0.100000	1.000	1.000
1500026000	15	Barley, flour	0.100000	1.000	1.000
1500026001	15	Barley, flour-babyfood	0.100000	1.000	1.000
1500027000	15	Barley, bran	0.100000	1.000	1.000

1500127000	15	Corn, sweet	0.010000	1.000	1.000
1500127001	15	Corn, sweet-babyfood	0.010000	1.000	1.000
1500231000	15	Oat, bran	0.010000	1.000	1.000
1500232000	15	Oat, flour	0.010000	1.000	1.000
1500232001	15	Oat, flour-babyfood	0.010000	1.000	1.000
1500233000	15	Oat, groats/rolled oats	0.010000	1.000	1.000
1500233001	15	Oat, groats/rolled oats-babyfood	0.010000	1.000	1.000
1500328000	15	Rye, grain	0.010000	1.000	1.000
1500329000	15	Rye, flour	0.010000	1.000	1.000
1500381000	15	Triticale, flour	0.100000	1.000	1.000
1500381001	15	Triticale, flour-babyfood	0.100000	1.000	1.000
1500401000	15	Wheat, grain	0.100000	1.000	0.100
1500401001	15	Wheat, grain-babyfood	0.100000	1.000	0.100
1500402000	15	Wheat, flour	0.100000	1.000	0.100
1500402001	15	Wheat, flour-babyfood	0.100000	1.000	0.100
1500403000	15	Wheat, germ	0.100000	1.000	0.100
1500404000	15	Wheat, bran	0.100000	1.000	0.100
2001163000	20A	Flax seed, oil	0.100000	1.000	1.000
2001319000	20A	Rapeseed, oil	0.100000	1.000	1.000
2001319001	20A	Rapeseed, oil-babyfood	0.100000	1.000	1.000
2001336000	20A	Sesame, seed	0.100000	1.000	1.000
2001336001	20A	Sesame, seed-babyfood	0.100000	1.000	1.000
2001337000	20A	Sesame, oil	0.100000	1.000	1.000
2001337001	20A	Sesame, oil-babyfood	0.100000	1.000	1.000
2003128000	20C	Cottonseed, oil	0.050000	1.000	1.000
2003128001	20C	Cottonseed, oil-babyfood	0.050000	1.000	1.000
3100044000	31	Beef, meat	0.050000	1.000	1.000
3100044001	31	Beef, meat-babyfood	0.050000	1.000	1.000
3100045000	31	Beef, meat, dried	0.050000	1.920	1.000
3100046000	31	Beef, meat byproducts	0.100000	1.000	1.000
3100046001	31	Beef, meat byproducts-babyfood	0.100000	1.000	1.000
3100047000	31	Beef, fat	0.100000	1.000	1.000
3100047001	31	Beef, fat-babyfood	0.100000	1.000	1.000
3100048000	31	Beef, kidney	0.100000	1.000	1.000
3100049000	31	Beef, liver	0.400000	1.000	1.000
3100049001	31	Beef, liver-babyfood	0.400000	1.000	1.000
3200169000	32	Goat, meat	0.050000	1.000	1.000
3200170000	32	Goat, meat byproducts	0.100000	1.000	1.000
3200171000	32	Goat, fat	0.100000	1.000	1.000
3200172000	32	Goat, kidney	0.100000	1.000	1.000
3200173000	32	Goat, liver	0.400000	1.000	1.000
3300189000	33	Horse, meat	0.050000	1.000	1.000
3400290000	34	Pork, meat	0.050000	1.000	1.000
3400290001	34	Pork, meat-babyfood	0.050000	1.000	1.000
3400291000	34	Pork, skin	0.100000	1.000	1.000
3400292000	34	Pork, meat byproducts	0.100000	1.000	1.000
3400292001	34	Pork, meat byproducts-babyfood	0.100000	1.000	1.000
3400293000	34	Pork, fat	0.100000	1.000	1.000
3400293001	34	Pork, fat-babyfood	0.100000	1.000	1.000
3400294000	34	Pork, kidney	0.100000	1.000	1.000
3400295000	34	Pork, liver	0.400000	1.000	1.000
3500339000	35	Sheep, meat	0.050000	1.000	1.000
3500339001	35	Sheep, meat-babyfood	0.050000	1.000	1.000
3500340000	35	Sheep, meat byproducts	0.100000	1.000	1.000
3500341000	35	Sheep, fat	0.100000	1.000	1.000
3500341001	35	Sheep, fat-babyfood	0.100000	1.000	1.000
3500342000	35	Sheep, kidney	0.100000	1.000	1.000
3500343000	35	Sheep, liver	0.400000	1.000	1.000
3600222000	36	Milk, fat	0.020000	1.000	1.000
3600222001	36	Milk, fat-baby food/infant formu	0.020000	1.000	1.000
3600223000	36	Milk, nonfat solids	0.020000	1.000	1.000
3600223001	36	Milk, nonfat solids-baby food/in	0.020000	1.000	1.000
3600224000	36	Milk, water	0.020000	1.000	1.000
3600224001	36	Milk, water-babyfood/infant form	0.020000	1.000	1.000
3600225001	36	Milk, sugar (lactose)-baby food/	0.020000	1.000	1.000
7000145000	70	Egg, whole	0.020000	1.000	1.000
7000145001	70	Egg, whole-babyfood	0.020000	1.000	1.000
7000146000	70	Egg, white	0.020000	1.000	1.000
7000146001	70	Egg, white (solids)-babyfood	0.020000	1.000	1.000
7000147000	70	Egg, yolk	0.020000	1.000	1.000
7000147001	70	Egg, yolk-babyfood	0.020000	1.000	1.000
8601000000	86A	Water, direct, all sources	0.013600	1.000	1.000
8602000000	86B	Water, indirect, all sources	0.013600	1.000	1.000
9500023000	0	Banana	0.005000	1.000	1.000
9500023001	0	Banana-babyfood	0.005000	1.000	1.000
9500024000	0	Banana, dried	0.005000	3.900	1.000
9500024001	0	Banana, dried-babyfood	0.005000	3.900	1.000
9500177000	0	Grape, leaves	0.613000	1.000	0.050

9500178000	O	Grape, raisin	0.613000	3.500	0.050
9500215000	O	Mango	0.070000	1.000	1.000
9500215001	O	Mango-babyfood	0.070000	1.000	1.000
9500216000	O	Mango, dried	0.070000	1.000	1.000
9500217000	O	Mango, juice	0.070000	1.000	1.000
9500217001	O	Mango, juice-babyfood	0.070000	1.000	1.000
9500245000	O	Papaya	0.016000	1.000	1.000
9500245001	O	Papaya-babyfood	0.016000	1.000	1.000
9500246000	O	Papaya, dried	0.016000	1.800	1.000
9500247000	O	Papaya, juice	0.016000	1.500	1.000
9500283000	O	Plantain	0.005000	1.000	1.000
9500284000	O	Plantain, dried	0.005000	3.900	1.000

Attachment 4: DEEM-FCID Chronic Exposure Estimates

US EPA Ver. 3.16, 03-08-d
DEEM-FCID Chronic analysis for DIFENOCONAZOLE NHANES 2003-2008 2-day
Residue file name: C:\Users\tmorton\Documents\My Files\DEEM Files\128847 Difenoconazole\128847
Difenoconazole 4F8231 Sept 2014\128847Chronic Sept 2014 AVG FT PDP percent CT.R08
Adjustment factor #2 used.

Analysis Date 02-24-2015/07:41:16 Residue file dated: 10-16-2014/13:34:31
Reference dose (RfD, Chronic) = .01 mg/kg bw/day

=====
Total exposure by population subgroup
=====

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of Rfd
Total US Population	0.002554	25.5%
Hispanic	0.002723	27.2%
Non-Hisp-White	0.002470	24.7%
Non-Hisp-Black	0.002653	26.5%
Non-Hisp-Other	0.002999	30.0%
Nursing Infants	0.004977	49.8%
Non-Nursing Infants	0.008892	88.9%
Female 13+ PREG	0.002191	21.9%
Children 1-6	0.006902	69.0%
Children 7-12	0.003380	33.8%
Male 13-19	0.002040	20.4%
Female 13-19/NP	0.001927	19.3%
Male 20+	0.001970	19.7%
Female 20+/NP	0.001903	19.0%
Seniors 55+	0.002073	20.7%
All Infants	0.007683	76.8%
Female 13-50	0.001817	18.2%
Children 1-2	0.008828	88.3%
Children 3-5	0.006009	60.1%
Children 6-12	0.003676	36.8%
Youth 13-19	0.001980	19.8%
Adults 20-49	0.001847	18.5%
Adults 50-99	0.002068	20.7%
Female 13-49	0.001814	18.1%

FOOD ONLY

US EPA Ver. 3.16, 03-08-d
DEEM-FCID Chronic analysis for DIFENOCONAZOLE NHANES 2003-2008 2-day
Residue file name: C:\Users\tmorton\Documents\My Files\DEEM Files\128847 Difenoconazole\128847
Difenoconazole 4F8231 Sept 2014\128847Chronic Sept 2014 AVG FT PDP percent CT Food Only.R08
Adjustment factor #2 used.

Analysis Date 02-24-2015/07:41:44 Residue file dated: 02-24-2015/07:40:09
Reference dose (RfD, Chronic) = .01 mg/kg bw/day

=====
Total exposure by population subgroup
=====

Population Subgroup	Total Exposure	
	mg/kg body wt/day	Percent of Rfd
Total US Population	0.002269	22.7%
Hispanic	0.002452	24.5%
Non-Hisp-White	0.002177	21.8%
Non-Hisp-Black	0.002418	24.2%
Non-Hisp-Other	0.002671	26.7%
Nursing Infants	0.004719	47.2%
Non-Nursing Infants	0.007945	79.4%
Female 13+ PREG	0.001923	19.2%
Children 1-6	0.006537	65.4%
Children 7-12	0.003143	31.4%
Male 13-19	0.001844	18.4%
Female 13-19/NP	0.001707	17.1%
Male 20+	0.001704	17.0%

Female 20+/NP	0.001604	16.0%
Seniors 55+	0.001797	18.0%
All Infants	0.006949	69.5%
Female 13-50	0.001534	15.3%
Children 1-2	0.008417	84.2%
Children 3-5	0.005663	56.6%
Children 6-12	0.003426	34.3%
Youth 13-19	0.001773	17.7%
Adults 20-49	0.001563	15.6%
Adults 50-99	0.001787	17.9%
Female 13-49	0.001531	15.3%

Attachment 5: Percent Crop Treated Memorandum

Difenoconazole (128847)
Screening Level Usage Analysis (SLUA)
Date: October 2, 2014

What is a Screening Level Usage Analysis (SLUA)?

- Available estimates of pesticide usage data for a particular active ingredient that is used on **agricultural** crops in the United States.
- Pesticide usage data obtained from various sources. The data are then merged, averaged, and rounded so that the presented information is not proprietary, business confidential, or trade secret.

What does it contain?

- Pesticide usage data for a **single** active ingredient only.
- Agricultural use sites (crops) that the pesticide is *reported* to be used on.
- Available pesticide usage information from U.S. states that produce 80% or more of a crop, in most cases, or less than 80%, in rare cases, depending on the scope of the survey and available resources.
- Annual percent of crop treated (**average & maximum**) for each agricultural crop.
- Average annual pounds of the pesticide applied for each agricultural crop (i.e., for the states surveyed, not for the entire United States).

What assumptions can I make about the reported data?

- **Average pounds of active ingredient applied** - Values are calculated by merging pesticide usage data sources together; averaging across all observations, then rounding. *Note: If the estimated value is less than 500, then that value is labeled <500. Estimated values between 500 & <1,000,000 are rounded to 1 significant digit. Estimated values of 1,000,000 or greater are rounded to 2 significant digits.)*
- **Average percent of crop treated** - Values are calculated by merging data sources together; averaging by year, averaging across all years, & rounding to the nearest multiple of 5. *Note: If the estimated value is less than 2.5, then the value is labeled <2.5. If the estimated value is less than 1, then the value is labeled <1.*
- **Maximum percent of crop treated** - Value is the single maximum value reported across all data sources, across all years, & rounded up to the nearest multiple of 5. *Note: If the estimated value is less than 2.5, then the value is labeled <2.5.*

What are the data sources used?

- **USDA-NASS** (United States Department of Agriculture's National Agricultural Statistics Service) – pesticide usage data from 2004 to 2012.
- **Private pesticide market research** – pesticide usage data from 2004 to 2012.
- **California Department of Pesticide Regulation (DPR) Pesticide Use Reporting (PUR)** data for 2004 to 2011.

What are the limitations to the data?

- Additional registered uses may exist but are not included because the available surveys do not report usage (e.g., small acreage crops).
- Lack of reported usage data for the pesticide on a crop **does not imply** zero usage.
- Usage data on a particular site may be noted in data sources, but **not quantified**. In these instances, the site would not be reported in the SLUA.

- Non-agricultural use sites (e.g., turf, post-harvest, mosquito control, etc.) are not reported in the SLUA. A separate request must be made to receive these estimates.
- Some sites show some use, even though they are not on the label. This usage could be due to various factors, including, but not limited to Section 18 requests, existing stocks of the chemical, data collection errors, and experimental use permits (EUPs).

Date: October 2, 2014
Screening Level Estimates of Agricultural Uses of Difenoconazole (128847)
Sorted Alphabetically
Reporting Years: 2004-2012

	Crop	Average	Percent Crop Treated	
		Lbs. A.I.	Average	Maximum
1	Almonds	7,000	5	15
2	Apples	7,000	15	25
3	Brussels Sprouts *	<500	NC	NC
4	Cabbage	<500	<2.5	5
5	Cantaloupes	<500	<2.5	<2.5
6	Cucumbers	3,000	5	10
7	Garlic	<500	5	5
8	Grapefruit	<500	<2.5	<2.5
9	Grapes	9,000	5	10
10	Onions	2,000	5	10
11	Oranges	1,000	<2.5	<2.5
12	Peaches	<500	<1	<2.5
13	Pears	<500	5	10
14	Pecans	1,000	<2.5	<2.5
15	Peppers	<500	<2.5	5
16	Pistachios	<500	<2.5	5
17	Potatoes	20,000	15	30
18	Pumpkins	<500	<2.5	5
19	Squash	<500	5	10
20	Strawberries	<500	<2.5	<2.5
21	Sugar Beets	20,000	15	30
22	Tangerines	1,000	<2.5	<2.5
23	Tomatoes	7,000	25	40
24	Walnuts	<500	<2.5	<2.5
25	Watermelons	2,000	5	10
26	Wheat (Seed Treatment)	40,000	10	15

All numbers are rounded.

<500: less than 500 pounds of active ingredients.

<2.5: less than 2.5 percent of crop is treated.

<1: less than 1 percent of crop is treated.

* Based on CA DPR data only (80% or more of U.S. acres grown are in California)

NC: not calculated, only pounds a.i. available.

SLUA data sources include:

USDA-NASS (United States Department of Agriculture's National Agricultural Statistics Service)

Private Pesticide Market Research

California DPR (Department of Pesticide Regulation)

These results reflect amalgamated data developed by the Agency and are releasable to the public.